

GOALS

- To create an international scientific network that will optimize the research in the area of polymers at engineered interfaces and nanocomposites.
- To establish open communication between participating institutions that provides an international component to the team concept and offers students effective learning opportunities.

International Programs Garcia MRSEC

Goals:

- **Promote mutually beneficial scientific collaborations between government sponsored research centers and our MRSEC.**
- **Provide opportunities to experience science in other countries for MRSEC faculty and students.**
- **Establish cultural links to enhance science and engineering education in both countries.**
- **Create international industrial partnerships.**

Outcome:

- **Established research collaborations with Korea, Germany, and France in Nano and bio technology.**
- **Raised \$500K in matching funds from government and private industry partners foreign countries.**
- **Established collaborations between large DOE user facilities in the US, Germany and Korea.**
- **Initiated successful international RET and REU programs.**



Hands-on experiments in Taejon Science High school.



A half day meeting with the high school teachers of the Institute for Gifted Student Education of KAIST



Tina Brower, a graduate student from Poly, and a Korean graduate student from KAIST making friends.



Dick Stein discussed how HS teachers can use the Internet for remote access to experiments



BIOFUNCTIONAL SYSTEMS & POLYMERS AT INTERFACES

4th Annual University/Industry Workshop

S F B 5 6 3

Biorganic Functional
Systems on Solids

Garcia MRSEC

Polymers at Engineered
Interfaces



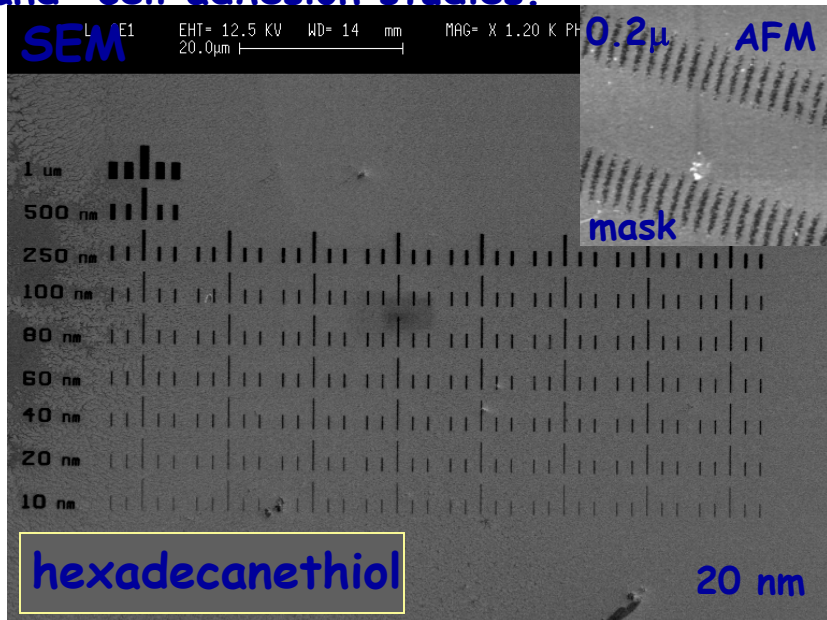
DFG

Munich, Germany
June 20-22, 2001

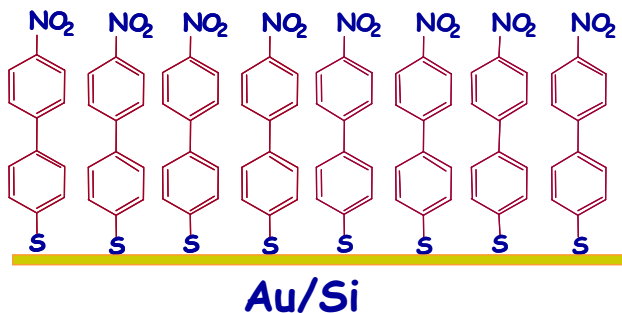
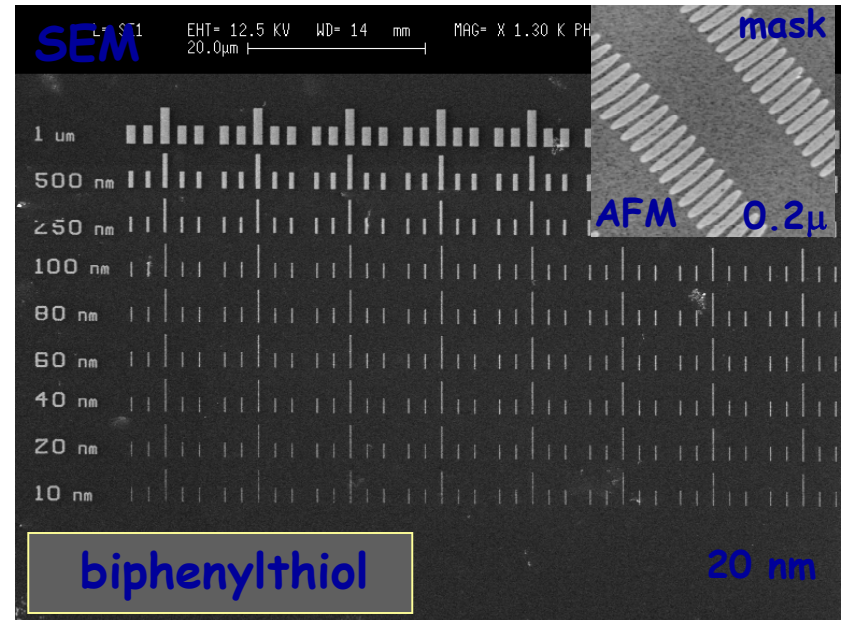


"Direct Writing" in SAMs with electron beam lithography (EBL)

- ⇒ A collaboration between the SFB and the Garcia MRSEC on Nanolithography
- ⇒ SFB has electron beam nanolithography facilities
- ⇒ MRSEC provides the self assembled monolayers and surface characterization capability
- ⇒ Patterned surfaces to be used for nanorheological measurements, wetting, and cell adhesion studies.



direct writing



EBL results in reduction of the NO_2 to NH_2 groups and polymerization of the irradiated SAM

